

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated January 9, 2007, has been received and its contents carefully reviewed.

Claims 1, 2, 5-8, 15-18, 20 and 21 are rejected by the Examiner. Claims 1, 2, 5-8, 15-18, 20 and 21 remain pending in this application.

In the Office Action, claims 1, 2, 6-8, 15, 16, 18, and 21 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,677,704 to Kusano et al. (hereinafter "Kusano") and claims 5, 17, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kusano in view of U.S. Patent No. 4,775,891 to Aoki et al. (hereinafter "Aoki").

The rejection of claims 1, 2, 6-8, 15, 16, 18, and 21 under 35 U.S.C. § 102(b) as being anticipated by Kusano is respectfully traversed and reconsideration is requested. Applicant submits that Kusano does not disclose either explicitly or inherently each and every element recited in these claims of the present application.

Independent claim 1 recites a method of driving a liquid crystal display having a combination of features including, for example "modulating source data of one frame period using registered data from a frame period previous to the one frame period and supplying the modulated data to a liquid crystal panel at an initial period of the one frame period; and applying data different from the modulated data to the liquid crystal panel at a later period of the one frame period." Applicant submits that Kusano does not disclose, inherently or explicitly at least the above feature of the claims.

For example Kusano discloses in Table 2 and Table 3, as well as in the circuit shown in FIG. 3, using the data of a single current frame (30A, 30B, 30C, and 30D) in combination with frame count signals to generate frame data (3-bit data at output) over an output cycle. As shown in Table 2 and FIG. 4 of Kusano, the generated 3 bit data of Kusano is output over 3 frame periods separated by vertical sync pulses rather than "at an initial period of the one frame period" and "applying data different from the modulated data to the liquid crystal panel at a later period of the one frame period" as recited in claim 1.

Applicant submits that an output cycle of three frames as described in Kusano does not constitute a frame period, which is a time period between consecutive vertical sync pulses and accordingly that there is no disclosure in Kusano of “supplying the modulated data to a liquid crystal panel at an initial period of the one frame period; and applying data different from the modulated data to the liquid crystal panel at a later period of the one frame period” as recited in claim 1. Accordingly Applicant submits that Kusano does not anticipate claim 1 for at least this reason.

In the Response to Arguments section of the Office Action, the Examiner suggests that in Kusano “one cycle period includes three frames outputting from the frame rate control and this cycle period corresponds to the frame period as claimed.” Applicant submits that even taking the Examiner’s definition of a frame period as a three frame cycle to be correct, there is no disclosure in Kusano of “modulating source data of one frame period using registered data from a frame period previous to the one frame period” as recited in claim 1, where the frame period is the three frame output cycle cited by the Examiner. For example, all of the output data for an output cycle from the circuit in FIG. 3 of Kusano is generated using data for a single cycle in combination with frame count data generated during that single cycle. Accordingly, Applicant submits that that Kusano does not anticipate claim 1 for at least this additional reason. Applicant submits that no consistent definition of “frame period” allows interpreting Kusano as disclosing all of the features of claim 1.

Independent claim 7 recites an apparatus for driving a liquid crystal display having a combination of features including “a modulator modulating source data of one frame period using registered data from a frame period previous to the one frame period; and a data provider alternatively applying the modulated data and data different from the modulated data to the liquid crystal panel within the one frame period.” The Examiner rejects claim 7 using the same rationale given for claim 1. Applicant submits that Kusano fails to disclose the above identified features recited of claim 7 for the same reasons as discussed above for claim 1. Accordingly, Applicant submits that Kusano does not anticipate claim 7.

Applicant notes that claims 2, 6, 8, 15, and 16 depend respectively from claims 1 and 7 and each includes, by reference, all of the elements of their respective base claims. Accordingly, Applicant submits that Kusano does not anticipate claims 2, 6, 8, 15, and 16 at least by way of

the dependencies of the claims, and for the reasons given above for their respective base claims 1, and 7.

Independent claim 18 recites a liquid crystal display including a modulator having a similar combination of features to those discussed above for claim 7. The Examiner rejects claim 18 using the same rationale given for claim 7, additionally noting that Kusano discloses a liquid crystal display panel as recited in claim 18. Applicant submits Kusano does not disclose at least “a modulator modulating source data of one frame period based on registered data from a frame period previous to the one frame period; and a data provider alternatively applying the modulated source data and the source data to the liquid crystal panel through the data lines within the one frame period” as recited in claim 18 for the reasons given above for claim 7. Accordingly, Applicant respectfully submits that Kusano does not anticipate claim 18.

Independent claim 21 recites a method of driving a liquid crystal display having a combination of features including “applying a modulated data signal to a liquid crystal panel within one frame period; and wherein the modulated data signal has a voltage level larger than that of the data signal, and wherein the modulated data signal depends on data from a frame period previous to the one frame period and on data from the one frame period.” Applicant submits that Kusano does not disclose at least a modulated signal “wherein the modulated data signal has a voltage level larger than that of the data signal, and wherein the modulated data signal depends on data from a frame period previous to the one frame period and on data from the one frame period.” Accordingly, Applicant submits that Kusano does not anticipate claim 21.

The rejection of claims 5, 17, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Kusano in view of Aoki is respectfully traversed and reconsideration is requested.

Applicant notes that claims 5, 17, and 20 depend respectively from claims 1, 7, and 18 and that each includes by reference all of the limitations of the respective base claims.

As Applicant has discussed above, Kusano does not anticipate claims 5, 17, and 20. The Examiner cites Aoki as allegedly curing deficiencies explicitly recited in claims 5, 17, and 20. Applicant does not reach the Examiner’s conclusions regarding the teachings of Aoki. Applicant submits that Aoki does not cure the deficiencies in the teachings of Kusano regarding the

combination of features of claims 1, 7, and 18 as discussed above. Applicant submits that Kusano and Aoki, analyzed singly or in any combination, do not teach or suggest the combined features of claims 1, 7, and 18. Accordingly, Applicant respectfully submits that claims 1, 7, and 18, and claims 5, 17, and 20 depending respectively from claims 1, 7, and 18 are each allowable over Kusano and Aoki.


Applicant believes the application is in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. *A duplicate copy of this sheet is enclosed.*

Respectfully submitted,

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